



Establishing Regional Mentor Sites for the Management of the Cerulean Warbler and other Mature Forest

Project # 13-634

Background:

DoD Natural Resource Managers support military mission objectives and aim to manage the land in ways that benefit naturally occurring bird populations. The Cerulean Warbler is one of the fastest declining Neotropical migratory warblers, with high ratings of vulnerability from Partners in Flight (PIF), due to breeding and non-breeding threats. The warbler's preferred habitat is large areas of mature or old growth deciduous forests, where it forages and nests high in the canopy.

The heart of their range is in the Appalachian forests, where they prefer nesting on ridge tops and slopes. However, other populations outside of this region are often under-studied. Because of the need for more data concerning the Cerulean's population status across its range, this project aimed to study populations and habitat characteristics at DoD sites within different Bird Conservation Regions (BCRs). While worthy of conservation concern as a single species, Ceruleans are found alongside a diverse avian community, which also benefits from long-term management of mature forest ecosystems.

Objective:

Because of the need for more data concerning the Cerulean's population status across its range, this project aimed to study populations and habitat characteristics at DoD sites within different Bird Conservation Regions (BCRs). From this, it was our goal to provide case studies and management recommendations for each of these mentor sites that could be used to facilitate management on other installations with similar habitats.

Summary of Approach:

We chose to study three mentor sites on installations that supported Cerulean Warbler populations, conducted previous research on the species, and had available spatial data layers for habitat analyses. Our methods included collecting field data, historical site data, and spatial data to create a case study with management recommendations for each of our three mentor sites.

Benefit:

DoD Natural Resource Managers are expected to sustain viable populations of all species on their lands, which requires an understanding how wildlife populations respond to forest management practices. These case studies and management recommendations provide forest management information for installations that support Cerulean Warbler populations, a rapidly declining species, within the same BCR and similar habitats.

Accomplishments:

In 2014 and 2015, we conducted research at the following three mentor sites: Fort Custer Training Center (Prairie Hardwood Transition, BCA 23), Fort Leavenworth (Eastern Tallgrass Prairie, BCR 22), and NSA Crane (Central Hardwoods, BCA 24). Tasks were as follows:

- Conducted field surveys to document warbler territories and nests if possible.
- Conducted forestry surveys in areas of use and non-use by Cerulean Warblers.
- Examined forest history and current management practices.
- Used Geographic Information Systems (GIS) and spatial data layers, including lidar, to examine habitat use.

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